CATHERINE HWU

CONTACT

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EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY

Expected Graduation: May 2023
GPA: 4.0 / 4.0

B.S. Electrical Engineering & Computer Science

LYNBROOK HIGH SCHOOL

August 2015 - June 2019
GPA: 4.0 / 4.0
GPA (Weighted): 4.375 / 4.0

SKILLS

Proficient: Java, Python, Scheme, SQL, Git, IntelliJ, Numpy

Familiar: HTML, CSS, NodeJS

Adobe Creative Suite: Photoshop, Lightroom, InDesign

Microsoft Office: Excel, Word, Powerpoint

Art Mediums: Installation, Digital Media, Graphite, Printmaking

COURSEWORK

The Structure and Interpretation of Computer Programs

Data Structures

Multivariable Calculus

Designing Information Devices and Systems

AWARDS

Grace Hopper Celebration GHC 2020 Scholars Program - *AnitaB.org*
Edward Frank Kraft Award - *UC Berkeley*
National Merit Finalist
AP Scholar with Honor
Presidential Service Award
Beth Fleig Award Nominee - *Lynbrook*
Red, White, & Blue Awards - *Lynbrook*
Dr. Joseph W. Watson Award - *COSMOS*
Center for Ethics in Science & Technology 2nd Place - *COSMOS*

PROFESSIONAL EXPERIENCE

EDLYFT (YCOMBINATOR W20 STARTUP)

Internship - Mentor for CS61BL Cohort | May 2020 - Present

- Mentor a cohort of 10+ students enrolled in Berkeley's CS61BL
- Design a five-module curriculum to help students prepare for Berkeley's CS61BL
- Lead weekly sessions that review course material (Java, Data Structures, Algorithms)
- Hold office hours for students to ask conceptual questions or request debugging help
- Actively answer students' questions 24/7 on Slack or by email

UC BERKELEY ELECTRICAL ENGINEERING & COMPUTER SCIENCE (EECS)

Academic Intern for CS61BL (Data Structures) | June 2020 - Present

- Help students debug code in lab sections for labs and projects
- Teach students course concepts (Java, Data Structures, Sorting Algorithms, Graphs)

HYGIENE HEROES - HAAS PROFESSOR DAVID I. LEVINE

Research Assistant & Game Developer | January 2020 - Present

- Design a Game Engine that allows designers to create a variety of board games easily
- Developing the Game Engine with LibGDX and Java
- With a spreadsheet from the designer as a configuration file, the Game Engine can create highly customizable board games (similar to Chutes & Ladders). This program helps Hygiene Heroes educate children in developing countries about various hygiene practices, such as washing their hands or brushing their teeth, through interactive board games.

SOCIETY OF WOMEN ENGINEERS (SWE)

SWE++ Co-Chair | May 2020 - Present
Elementary & Middle School Outreach Officer | December 2019 - May 2020
SWE Science Committee Member | September 2019 - December 2019

- Lead a 10-week coding program that teaches middle school Python and Scratch
- Teach elementary and middle school students various engineering concepts (including Laws of Motion, Non-Newtonian Fluids, Genetics, Aerodynamics)
- Plan monthly SWE Science events for local elementary and middle school students
- Assemble educational resources for families, including a SWE Science Science Kit
- Lead a committee in executing and planning these events

ASSOCIATION OF WOMEN IN EE & CS (AWE)

Operations Officer | December 2020 - Present

- Manage budget, funding, and reimbursements
- Update the club website and record meeting notes from officer meetings
- Plan and lead club events, including The Cal Day Virtual Panel

PROJECTS

SLACK BOT FOR ASSOCIATION OF WOMEN IN EE & CS (AWE) WORKSPACE

Slack API, NodeJS, Google Script, HTML | April 2020 - Present

- Designed a bot using NodeJS and BotKit and integrated it into a Slack workspace
- Slack Bot allows AWE to easily collect feedback from AWE members
- Slack Bot provides a way for members to check in at AWE events and helps AWE's executive board track member attendance throughout the semester
- Developed a web app with Google Scripts so data collected by the Slack Bot can be written onto a Google Spreadsheet for AWE's executive board to easily access

GITLET (MINI VERSION CONTROL SYSTEM)

Java | April 2020

- Created a mini version control system that mimics the functionality of Git
- Supports init, add, commit, status, log, branch, merge, checkout, reset, rm
- Implementation involved SHA1 hashing, file persistence, serialization, various data structures, and graph traversals

LINES OF ACTION BOARD GAME WITH AI

Java | April 2020

- Developed a GUI Board Game Lines of Action (invented by Claude Soucie)
- Used game trees, the minimax algorithm, and alpha-beta pruning to program AI player
- Created a heuristic to evaluate the strength of a given board state for either player